Application No.: 10/614,518

Reply to Office Action of: June 25, 2007

## **REMARKS**

Claims 9-25 are active in this application.

Applicants wish to thank Examiner Mazumdar for indicating allowability of Claims 10 and 19.

Applicants respectfully request reconsideration of the application in view of the following remarks.

The present invention as set forth in **Claim 9** relates to a method for producing functional film, comprising:

applying a coating liquid having functional microparticulates dispersed therein onto a support, thereby forming a microparticulate-containing coating,

drying the microparticulate-containing coating,

compressing the microparticulate-containing coating at a temperature of 15 to 40°C, thereby forming a functional film comprising a compressed microparticulate-containing layer, and

transferring the functional film onto another support;

wherein the compressed microparticulate-containing layer does not have cracks and is capable of being drawn 10% without forming cracks; and

wherein the compressed microparticulate-containing layer does not comprise a resin as a binder.

The present invention as set forth in **Claim 18** relates to a method for producing a functional film, comprising:

applying a coating liquid having functional microparticulates dispersed therein onto a support, thereby forming a microparticulate-containing coating,

drying the microparticulate-containing coating,

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compressing the microparticulate-containing coating at a temperature of 15 to 40°C thereby forming a functional film comprising a compressed microparticulate-containing layer, and

transferring the functional film onto another support;

wherein the compressed microparticulate-containing layer is capable of being drawn 10% and in a 10% drawn state exhibits a surface resistivity which is at most 10 times greater than the surface resistivity prior to drawing; and

wherein the compressed microparticulate-containing layer does not comprise a resin as a binder.

Oka et al and Bilhorn fail to disclose or suggest a methods for producing functional film as claimed in Claims 9 and 18. Specifically, Oka neither discloses nor suggests the compressing the functional ultra fine particle layer 2 itself after being dried and prior to transferring to the substrate film.

Therefore, in Oka, it is impossible to increase the packing density of microparticulates in the microparticulate-containing layer and form microparticulate-containing coating free from cracks, capable of being drawn 10% without forming cracks and exhibiting a surface resistivity in a 10% drawn state which is at most 10 times greater than the surface resistivity prior to drawing.

Bilhorn discloses a method for forming a zinc electrode comprising steps of preparing a coating solution by blending a bonding agent with zinc particles such as zinc metal, zinc oxide and the mixture thereof in finely divided powder form, applying the coating solution onto a conveyor belt 22 using a doctor blade coating method to form a coating layer 28, placing a grid 32 of copper or the like on the coating layer 28, causing a laminated body of the conveyor belt 22, the coating layer 28 and the grid 32 to pass through a nip 35 between

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rollers 36 and 38 and compressing it so that the grid 32 is firmly embedded in the coating layer 28 (column 3, line 64 to column 4, line 27).

Further, <u>Bilhorn</u> discloses that the coating layer 28 on which the grid 32 is placed can be compressed so that the grid 32 can be firmly embedded in the coating layer 28 without the necessity of elevated temperature by causing a laminated body of the conveyor belt 22, the coating layer 28 and the grid 32 to pass through the nip 35 between the rollers 36 and 38 via a pressure nip 35 (column 4, lines 14 to 20).

Bilhorn does not disclose compressing only the conveyor belt 22 and the coating layer 28 by the rollers 36 and 38 but merely teaches compressing a laminated body of the conveyor belt 22, the coating layer 28 and the grid 32 by the rollers 36 and 38 via a pressure nip 35 so that the grid 32 can be firmly embedded in the coating layer 28.

Specifically, in <u>Bilhorn</u>, since a laminated body of the conveyor belt 22, the coating layer 28 and the grid 32 is compressed by the rollers 36 and 38 via a pressure nip 35 so that the grid 32 can be firmly embedded in the coating layer 28, only portions of the coating layer 28 on which the grid 32 is placed are compressed by the rollers 36 and 38 and other portions of the coating layer 28 cannot be compressed by the rollers 36 and 38.

Therefore, even if a laminated body of the conveyor belt 22, the coating layer 28 and the grid 32 is compressed by the rollers 36 and 38 via a pressure nip 35, it is impossible to increase the packing density of zinc oxide in the conductive coating (28) and form the conductive coating (28) free from cracks, capable of being drawn 10% without forming cracks and exhibiting a surface resistivity in a 10% drawn state which is at most 10 times greater than the surface resistivity prior to drawing.

In fact, <u>Bilhorn</u> states at column 4, lines 36 to 41 that the concentration and distribution of bonding agent in electrode 52 is controlled so that surfaces of electrode 52 are porous to liquid. As a result, the packing density cannot be increased in <u>Bilhorn</u>.

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As stated above, since <u>Oka</u> merely discloses that when the functional ultrafine particle layer 2 coated on the release film 1 is to be transferred onto and bonded with another support, the functional ultrafine particle layer 2 is compressed together with the release film 1 and another support and does not teach compressing the functional ultrafine particle layer 2 itself, it is impossible to increase the packing density of the functional ultrafine particles in the functional ultrafine particle layer 2. Therefore, even if the Examiner's consideration about the disclosure of <u>Bilhorn</u> was correct, the subject matter of the present Claims 9 and 18 is not obvious from the combination of <u>Bilhorn</u> with <u>Oka</u>.

Further, since <u>Bilhorn</u> merely teaches compressing a laminated body of the conveyor belt 22, the coating layer 28 and the grid 32 by the rollers 36 and 38 via a pressure nip 35 so that the grid 32 can be firmly embedded in the coating layer 28 and only portions of the coating layer 28 on which the grid 32 is placed are compressed by the rollers 36 and 38 but other portions of the coating layer 28 cannot be compressed by the rollers 36 and 38 in <u>Bilhorn</u>, even if a laminated body of the conveyor belt 22, the coating layer 28 and the grid 32 is compressed by the rollers 36 and 38 via a pressure nip 35, it is impossible to increase the packing density of zinc oxide in the conductive coating (28).

Therefore the rejection of the claims over <u>Oka</u> in view of <u>Bilhorn</u> should be withdrawn.

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This application presents allowable subject matter, and the Examiner is kindly requested to pass it to issue. Should the Examiner have any questions regarding the claims or otherwise wish to discuss this case, he is kindly invited to contact Applicants' below-signed representative, who would be happy to provide any assistance deemed necessary in speeding this application to allowance.

Respectfully submitted,

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